

# SEQUENCE LISTING

<110> Manners, John M.  
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<120> ANTI-MICROBIAL PROTEIN

<130> CULLN18.1CP1C1

<150> 09/364395

<151> 1999-07-30

<150> 09/117615

<151> 1998-11-09

<150> PCT/AU97/00052

<151> 1997-01-31

<150> AU PN 7802

<151> 1996-01-31

<160> 21

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 102

<212> PRT

<213> Macadamia integrifolia

<400> 1

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Ile	Ala	Met	Ala	Ser	Glu	Met	Val	Asn	Gly	Ser	Ala	Phe	Thr	Val	Trp
		20						25					30		
Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu	Arg	Tyr	Ser	Lys	Cys	Gly
		35					40					45			
Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr	Asp	Phe	Ser	Tyr	Thr	Gly
	50					55				60					
Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly	Cys	Ser	Gly	Val	Ala	His
65					70				75						80
Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys	Asn	Pro	Phe	Gly	Trp	Lys
				85					90					95	
Ser	Ile	Phe	Ile	Gln	Cys										
				100											

<210> 2

<211> 493

<212> DNA

<213> Macadamia integrifolia

<220>

<221> CDS

<222> (70)...(375)

<223> y=t or c.

<400> 2

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acctcagcc atg gct tcc acc aag ttg ttc ttc tca gtc att act gtg atg 111

Met Ala Ser Thr Lys Leu Phe Phe Ser Val Ile Thr Val Met  
1 5 10

atg ctc ata gca atg gca agt gag atg gtg aat ggg agt gca ttt aca 159  
Met Leu Ile Ala Met Ala Ser Glu Met Val Asn Gly Ser Ala Phe Thr  
15 20 25 30

gta tgg agt ggt cca ggt tgt aac aac cgt gct gag cga tat agc aag 207  
Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu Arg Tyr Ser Lys  
35 40 45

tgt gga tgc tca gct ata cat cag aag gga ggc tat gac ttc agc tac 255  
Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr Asp Phe Ser Tyr  
50 55 60

act gga caa act gct gct ctc tac aac cag gct gga tgc agt ggt gtt 303  
Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly Cys Ser Gly Val  
65 70 75

gca cac acc agg ttt ggg tcc agt gcc agg gca tgc aac cct ttt ggt 351  
Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys Asn Pro Phe Gly  
80 85 90

tgg aag agt atc ttc atc caa tgc tagatttcat aactcttgga tccatcttct 405  
Trp Lys Ser Ile Phe Ile Gln Cys  
95 100

atgtttttca agtgtataat tagagagatg catggatata taataaataa gtaaaagcta 465  
cggtatcacc atgtgatgat tttyaccc 493

<210> 3

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Degenerate primer alpha.

<400> 3

ccgaagcagt tgcabgcbc 19

<210> 4

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Degenerate primer beta.

<400> 4

gagmgktatw skaagtgtgg 20

<210> 5  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 3' RACE primer alpha.

<400> 5  
tgctctctac aaccaggctg

20

<210> 6  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 5' RACE primer beta.

<400> 6  
gcattggatg aagatactc

19

<210> 7  
<211> 36  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> 5' RACE primer to anneal with poly-C-tailed cDNA  
primer alpha.

<221> misc\_feature  
<222> (0)...(0)  
<223> n = inosine

<400> 7  
ggccacgcgt cgactagtagt gggngggggn gggngg

36

<210> 8  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Mi28K primer. Mismatched oligonucleotide  
containing a mutation of the MiAMP1 coding  
sequence from amino acid Q(position 28) to K.

<400> 8  
gctatacata aaaagggagg

20

<210> 9  
<211> 20  
<212> DNA  
<213> Artificial Sequence



acaccatattg agtgcattta cagtatgagt g

31

<210> 14

<211> 35

<212> DNA

<213> Artificial Sequence

<220>

<223> Oligonucleotide primer from the 3' coding region  
of MiAMP1 (Mi2 primer).

<400> 14

gaagagtatc ttcattcaat gctaaggatc cacac

35

<210> 15

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Mi28K variant. Variant MiAMP1 protein Mi28K  
containing a Lysine at amino acid 28 (used primer  
from SEQ ID NO:8 to produce).

<400> 15

Ser	Ala	Phe	Thr	Val	Trp	Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu
1				5					10					15	
Arg	Tyr	Ser	Lys	Cys	Gly	Cys	Ser	Ala	Ile	His	Lys	Lys	Gly	Gly	Tyr
			20					25					30		
Asp	Phe	Ser	Tyr	Thr	Gly	Gln	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly
			35				40					45			
Cys	Ser	Gly	Val	Ala	His	Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys
			50			55					60				
Asn	Pro	Phe	Gly	Trp	Lys	Ser	Ile	Phe	Ile	Gln	Cys				
65					70					75					

<210> 16

<211> 76

<212> PRT

<213> Artificial Sequence

<220>

<223> Mi39K variant. Variant MiAMP1 protein Mi39K  
containing a Lysine at amino acid 39 (used primer  
from SEQ ID NO:9 to produce).

<400> 16

Ser	Ala	Phe	Thr	Val	Trp	Ser	Gly	Pro	Gly	Cys	Asn	Asn	Arg	Ala	Glu
1				5					10					15	
Arg	Tyr	Ser	Lys	Cys	Gly	Cys	Ser	Ala	Ile	His	Gln	Lys	Gly	Gly	Tyr
			20					25					30		
Asp	Phe	Ser	Tyr	Thr	Gly	Lys	Thr	Ala	Ala	Leu	Tyr	Asn	Gln	Ala	Gly
			35				40					45			
Cys	Ser	Gly	Val	Ala	His	Thr	Arg	Phe	Gly	Ser	Ser	Ala	Arg	Ala	Cys
			50			55					60				
Asn	Pro	Phe	Gly	Trp	Lys	Ser	Ile	Phe	Ile	Gln	Cys				
65					70					75					

09882434.064304

<210> 17  
<211> 76  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mi46K variant. Variant MiAMP1 protein Mi46K  
containing a Lysine at amino acid 46 (used primer  
from SEQ ID NO:10 to produce).

<400> 17  
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu  
1 5 10 15  
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr  
20 25 30  
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly  
35 40 45  
Cys Ser Gly Val Ala His Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys  
50 55 60  
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys  
65 70 75

<210> 18  
<211> 76  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mi54V variant. Variant MiAMP1 protein Mi54V  
containing a Valine at amino acid 54 (used primer  
from SEQ ID NO:11 to produce).

<400> 18  
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu  
1 5 10 15  
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr  
20 25 30  
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly  
35 40 45  
Cys Ser Gly Val Ala Val Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys  
50 55 60  
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys  
65 70 75

<210> 19  
<211> 76  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Mi54K variant. Variant MiAMP1 protein Mi54K  
containing a Lysine at amino acid 54 (used primer  
from SEQ ID NO:12 to produce).

<400> 19  
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu

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      1           5           10           15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
      20           25           30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Gln Ala Gly
      35           40           45
Cys Ser Gly Val Ala Lys Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
      50           55           60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
      65           70           75

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<210> 20  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mi46K/54V variant. Variant MiAMP1 protein  
 Mi46K/54V containing a Lysine at amino acid 46 and  
 a Valine at amino acid 54.

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<400> 20
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
      1           5           10           15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
      20           25           30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
      35           40           45
Cys Ser Gly Val Ala Val Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
      50           55           60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
      65           70           75

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<210> 21  
 <211> 76  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Mi46K/54K variant. Variant MiAMP1 protein  
 Mi46K/54K containing a Lysine at amino acid 46 and  
 a Lysine at amino acid 54.

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<400> 21
Ser Ala Phe Thr Val Trp Ser Gly Pro Gly Cys Asn Asn Arg Ala Glu
      1           5           10           15
Arg Tyr Ser Lys Cys Gly Cys Ser Ala Ile His Gln Lys Gly Gly Tyr
      20           25           30
Asp Phe Ser Tyr Thr Gly Gln Thr Ala Ala Leu Tyr Asn Lys Ala Gly
      35           40           45
Cys Ser Gly Val Ala Lys Thr Arg Phe Gly Ser Ser Ala Arg Ala Cys
      50           55           60
Asn Pro Phe Gly Trp Lys Ser Ile Phe Ile Gln Cys
      65           70           75

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